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PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

MILLIPEDS FROM THE NEVADA TEST AREA

BY RALPH V. CHAMBERLIN

Representatives of the species of millipeds herein considered were taken by field agents operating on a project entitled "Comparative Ecological Studies of Animals at the Nevada Test Site" conducted under contract between the Brigham Young University and the U. S. Atomic Energy Commission. These millipeds, which were referred to me for identification through the courtesy of Dr. D. Elden Beck, Associate Director of the project, were collected during the 1960-61 season between October and February when all seem to have attained sexual maturity.

Order SPIROBOLIDA
Family ATOPETHOLIDAE

Arinolus sequens, new species

Description: General color of body in preserved specimens gray or brownish gray with a narrow black annulus on the prozonite of the segments and with the caudal border of the metazonites more or less darkened. Body cylindrical between the narrowing portion in front of the sixth segment and the several most caudal segments.

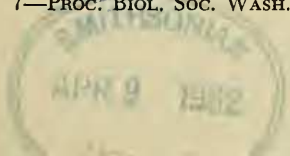
Eye patch or "ocellarium" forming an oblong area above base of antenna. Antennae of moderate length, slender, widening a little distad.

The acutely narrowed lower end of the collum straight, not at all bent caudad, its apex narrowly rounded and not extending below level of second tergite.

Ordinary somites with the median sulcus not very strongly impressed, lying in a shallow furrow. Ozopore on the metazonite. Segments longitudinally striate below.

In the male the sixth and seventh segments somewhat enlarged. The first three pairs of legs crassate with the claws not especially enlarged. Third legs lacking conspicuous coxal processes. Coxae of fourth and immediately following legs ventrally in the antero-posterior direction. In the gonopods the terminal process of the anterior pair extending well beyond that of the coxite (cf. Fig. 5). Distal expansion of the posterior gonopods proportionately large, broadly elliptical in outline with the margin smooth.

Number of segments, 48-49.
Width, 2 mm.



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Locality: NEVADA: vicinity of Mercury. The male type taken in November 1960.

Remarks: An exceptionally small form in which the anterior gonopods resemble those of *A. citrinus* Hoffman but the posterior pair differ especially in the much larger and differently formed distal expansion.

***Arinolus nevadae*, new species**

Description: Antennae of moderate length. Clypeal foveolae and setae mostly 3-3. Ocellarium in outline roughly subcircular, typically somewhat truncate below, with the ocelli typically in 6 or 7 series.

Collum with lower end straight, not bent caudad as it is in *A. michelbacheri* Verhoeff, the tip slightly exceeded by the second tergite (cf. Fig. 3).

Ordinary tergites with a distinct encircling median furrow in which lies the segmental sulcus, the furrow most distinct beneath. Ozopore contiguous with the furrow on its caudal side.

Telopodite of anterior gonopods of male characteristically bent abruptly ectad as shown in Fig. 1, exceeding the process of the coxite. Posterior gonopod of form shown in Fig. 2.

Number of segments, 43-44.

Width, 3 mm.

Locality: NEVADA: Mercury and adjacent area. Many specimens taken mostly in October, November, and December 1960, when the males are apparently all mature, no larval forms appearing in the collection.

Remarks: This and the species of *Orthichelus* listed below seem to be by far the commonest millipeds of the area.

Orthichelus michelbacheri (Verhoeff)

Onychelus michelbacheri Verhoeff, 1938, Zool. Anz., 122, p. 276, Figs. 1-3.

Onychelus phanus Chamberlin, 1941, Bull. Univ. Utah Biol. Serv., 6, No. 5, p. 6, Figs. 6, 7.

Orthichelus phanus Chamberlin and Hoffman, 1950, Chicago Acad. Sci., Nat. Hist. Misc., No. 71, p. 7.

Atopetholus michelbacheri Hoffman, 1960, Proc. U. S. Nat. Mus., 111, p. 138.

Heretofore known only from two specimens, one recorded by Verhoeff and one by myself (cf. citations above), both from the vicinity of Walker Pass in southern California, this species is represented by numerous specimens in the Nevada collection.

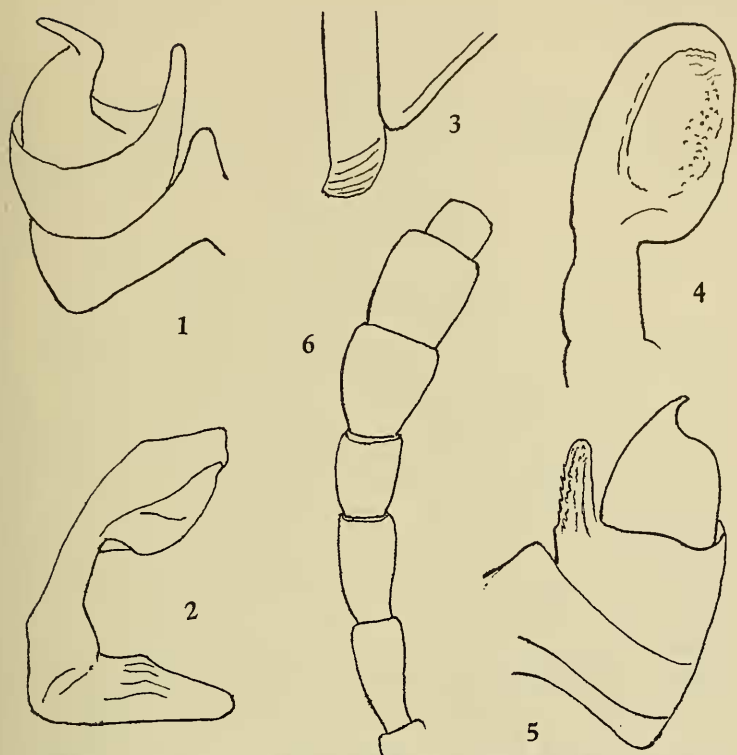
Order CAMBALIDA

Family LEIODERIDAE

***Titsona tida*, new species**

Description: Body light brown with the two longitudinal series of black spots over the repugnatorial glands very conspicuous. Body slender and cylindrical.

Segments constricted as in the type species by deep encircling furrows.



FIGS. 1-3. *Arinolus nevadae*, new species. FIG. 1.—Left anterior gonopod of male, cephalic aspect. FIG. 2.—Posterior gonopod. FIG. 3.—Lower end of collum and second tergite.

FIGS. 4-5. *Arinolus sequens*, new species. FIG. 4.—Posterior gonopod. FIG. 5.—Right anterior gonopod, cephalic aspect.

FIG. 6. *Titsona tida*, new species. Antenna, with setae omitted.

The segments between the second and fifth narrowed and thus forming a "neck."

Ocelli in a single series as in the generotype, five in number but the terminal one at each end much reduced in size. Antennae distally strongly clavate, the fifth and sixth articles abruptly much thicker than the others; the sixth article cylindrical, the fifth clavately widening from base.

The tergite of the first segment appears not to extend down the sides so far as in *T. sima*.

Length, c. 7-8 mm; width, 0.62 mm.

Locality: NEVADA: Nevada test area, vicinity of Mercury. Two specimens taken in March 1960.

Remarks: This is a much smaller form than *T. sima* Chamberlin, the generotype, and differs in the form and proportions of the enlarged articles of the antennae.